

Sea Basing: Past, Present and Future

**A Monograph
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ABSTRACT

SEA BASING: PAST, PRESENT AND FUTURE by Major Paul R. Mogg, United States Marine Corps, 49 pages.

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This monograph was written to explore the sea basing concept and assess the future capabilities. There are several alternatives that are being explored that could give U.S. forces a fully functional, joint sea base. Research included investigating the inception of the Maritime Prepositioning Force in the early 1980's through its employment in Desert Shield/Desert Storms and how its success influenced the DOD to mandate that the Army acquire a preposition capability of its own.

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INTRODUCTION

At the conclusion of the Cold War and after the first Gulf War, the United States went from a forward based military posture to one centered on power projection. The recent Department of Defense sponsored task force on sea basing noted that today's military is mostly based in the United States, posing the same strategic problem as we faced before World War Two--how to project America's immense military power across great oceanic distances that separate the nation from its strategic interests.¹ Turkey's refusal to allow the United States to use its territory as a jump off point for the invasion of Iraq was a significant event not only for that war but also in the formulation of arguments about and relating to the sea-base as a military entity. Colonel Arthur Corbett, the war-fighting requirements director at the Marine Corps Combat Development Command, described the impact of the refusal this way: "The Turks did us a big favor in pushing the sea-basing concept, our most reliable ally became an issue. Sea-basing is expensive but compared to the \$26 billion we were prepared to give Turkey, (in grants and loan guarantees) this is dimes on the dollar."² Money certainly played a part in Turkey's refusal to grant us access, but other issues, such as fear of reprisals from religious extremists and a population not committed to the cause, played a role for them as well. Fundamentally, though, those issues were immaterial; the United States of America was unable to project its awesome military power due to the lack of cooperation by another country. It is this lesson that has increased interest in the sea-basing concept. Lawrence Farrell of *National Defense Magazine* quoted Marine Corps Commandant Michael Hagee from a speech he gave at October 2003 Expeditionary Warfare Conference in Panama City, Florida. Gen Hagee said "The countries that

¹ Defense Science Board Task Force on Sea basing, William Schneider, DSB Chairman, Dr William Howard and Admiral Donald Piling Co-Chairmen. August 2003, Office of the Undersecretary of Defense for Acquisition, Technology and Logistics, Washington D.C., 3.

² Christian Lowe, "Pentagon backs Corps' Sea-basing plan", Marine Corps Times, December 1, 2003. available at <http://www.marinecorpstimes.com/archivepaper.php?f=0-MARINEPAPER-2396757.php> Internet; accessed 23 February 2004.

restricted access to U.S. forces during Operation Iraqi Freedom—Turkey, Austria, Belgium, Saudi Arabia—are our allies. The fact that friendly nations are becoming sensitive about hosting U.S. forces should be a wake-up call. In the future, access is going to become more difficult.”³

It is not just the operational flexibility that makes the sea-base an attractive alternative; it is the lack of land bases where we will need them. Williamson Murray, a noted military historian, stated in an article included in the Defense Science Board’s Task Force on Sea-Basing, “The places where the United States will continue to maintain bases, such as Europe --and perhaps Northeast Asia after Korea implodes--are the least likely to require US military support.” He asserts that those places most likely to require U.S. forces, like the Middle East, Southeast Asia and South Asia, are the least likely to have either the bases or infrastructure to support U.S. military forces.⁴

The idea of operating from a sea base did not begin with a United States diplomatic failure preceding Operation Iraqi Freedom. Indeed, throughout the annals of recorded history, as far back as the Peloponnesian War and the Norman Conquest, armies have been delivered to the field of battle from ships. More recently, Gallipoli, Operation Overlord and the invasions of the Pacific War provide examples of fighting from a lodgment created by naval forces. These events, while significant in the annals of military history, serve only as a starting point in addressing how the sea-base can provide military forces with both freedom of maneuver and opportunities for sustainment.

This monograph will seek to answer the following research question: What sea-based capability will be required and what capability can be reasonably made available to meet the future needs of a Combatant or Joint Force commander? Further, what system or system-of-

³ Lawrence Farrell Jr. “Access’ Challenges in Expeditionary Operations,” National Defense Magazine. December 2003. available at <http://www.nationaldefensemagazine.org/article.cfm? Id =1298>, Internet; accessed on 14 March 2004.

⁴ Williamson Murray, Defense Science Board Task Force on Sea Basing, Appendix E, August 2003, Office of the Undersecretary of Defense for Acquisition, Technology and Logistics Washington D.C.,136.

systems is getting research attention and programmed dollars that will permit its availability? In order to answer those questions though, we must first examine what it is that brought us to where we are.

Chapter one will explore the emergence of the Marine Corps' Maritime Preposition Force (MPF) in the 1980s and provides a look at what the nation was trying to accomplish with its investment in afloat prepositioning. The first real test of principle centered on the utilization of the MPF during Operations Desert Shield and Desert Storm in the early 1990s. The lessons learned from that use and from the employment in Operation Restore Hope soon after in Somalia led to the congressionally mandated Mobility Requirements Study (MRS). That study signaled the expansion of the Army's Prepositioned Stocks (APS) program, with the creation of the APS-3, the United States Army's afloat prepositioning program.⁵

Since APS-3 was established in the middle 1990s, sea-basing concepts have expanded to become centerpieces of emerging doctrines and philosophies of the services. Chapter two will focus on the near term possibilities of the doctrinal and technological innovations being considered within the DOD. SEA POWER 21, the Navy's concept of how power projection will be executed in the future, has as one of its pillars the idea of operations conducted from the sea-base. Similarly, the Marine Corps' emerging operational concepts of Ship-to-Objective-Maneuver (STOM) and Operational-Maneuver-from-the-Sea (OMFTS) view the involvement of the *future* Maritime Prepositioning Force or MPF(F), as vital to its vision of force projection. Another component of future operations from the sea-base is the Joint High Speed Vessel (JHSV). This ship, a fast moving catamaran with significant lift capabilities, has the potential to revolutionize intra-theater deployment as well as the replenishment of the future sea-based platform.⁶

⁵The army has prepositioned assets at various locations ashore, specifically in Europe and Kuwait. APS-3 added pre-positioned assets at sea. For more information on Army pre-positioning go to the Fort Lee website at www.lee.army.mil or Fort Eustis, at www.eustis.army.mil

⁶ "Austal unveils High Speed Military Vessel," available at http://www.austal.com/investor/article.cfm?news_id=60, Internet; accessed 31 March 2004.

In the future, freedom of maneuver and the ability to respond despite denial of access as occurred in Turkey could require some capability to advance or preserve America's national interests. Potentially, this capability could be sea based. There are several concepts of what the future sea base will look like, some of which are technological marvels of staggering expense. Others take into account the engineering limitations and fiscal realities while still seeming to promise worthwhile capabilities. Many questions exist within the sea basing community concerning the necessary characteristics of the future sea-based platform and the doctrinal advancements that will be required to achieve them. Another question to address is the part this capability will play in a coalition effort. Will this enormous investment limit the contributions of our allies who cannot match the material investment and thereby result in even more unilateral action by the United States?

The intent of this monograph, other than to answer the research question, is to make the reader familiar with present and near-term capabilities that can be of practical use to them and to examine what the future of the sea-base holds. Is it the panacea to anti-access that its proponents claim it to be? Or is it simply, though not insignificantly, a major operational capability that can be exploited along with traditional land based capabilities?

Before attempting to explain the programs that will be part of sea-basing and of the sea-base, let us define those terms. There are two definitions of the sea base and of sea basing that have been approved by both the Chief of Naval Operations (CNO) and the Commandant of the Marine Corps (CMC) and are in the updated Naval Transformation Roadmap draft:

Sea-basing- a national capability, is the overarching transformational operating concept for projecting and sustaining naval power and joint forces, which assures joint access by leveraging the operational maneuver of sovereign, distributed, and networked forces operating globally from the sea.

The sea base- An inherently maneuverable, scalable aggregation of distributed, networked platforms that enable the global power projection of offensive and defensive

forces from the sea, and includes the ability to assemble, equip, project, support and sustain those forces without reliance on land bases within the Joint Operations Area.⁷

CHAPTER ONE-Background and Existing Programs

“Let our position be absolutely clear: An attempt by any outside force to gain control of the Persian Gulf region will be regarded as an assault on the vital interests of the United States of America, and such an assault will be repelled by any means necessary, including military force.”⁸

So spoke President Jimmy Carter’s in his 1980 State of the Union Address in response to the deteriorating situation in the Middle East brought on by the fall of the Shah of Iran and the subsequent hostage crisis in Tehran as well as the Soviet Union’s invasion of Afghanistan.⁹

Despite his claim that our interests would be backed up with military force, it was not until 1 March 1980 that the United States created the Rapid Deployment Joint Task Force (RDJTF) at MacDill Air Force Base, Florida, with specific military responsibility for that region of the world.¹⁰

The RDJTF initially relied solely on airlifted combat units to respond to crises in the Middle-East region. To mitigate the potential problems reliance on airlift might cause, another stipulation was the sea basing of equipment in the area, able to sail on short order to troubled spots and marry up with troops flown into secure airbases and ports. The concept called for the construction of 14 prepositioning ships from 1981 to 1986, with the combined capability to transport the materiel for three Marine Amphibious Brigades. Until such ships were built, the

⁷ Sea Basing Newsletter number 28, 1 March 2004, Naval Warfare Development Command, Warfare Innovation Development Team, Newport Rhode Island. Internet, received via e-mail after enrollment with the NWDC/WIDT. Also available at the SharePoint site https://nwcportal.nwc.navy.mil/nwdc/sea_basing.

⁸ Carter, Jimmy. "State of the Union Address 1980," Jimmy Carter Library and Museum. 21 Jul. 2001. available at <http://www.jimmycarterlibrary.org/documents/speeches/su78jec.html>, Internet; accessed 9 February 2004.

⁹ David F. Winkler. "Ten years ago, Half a World Away," Sea Power May 2000, 23.

¹⁰“U.S. Central Command (USCENTCOM)” Global Security article.org <http://www.globalsecurity.org/military/agency/dod/centcom.htm>, Internet; accessed 9 February 2004.

Defense Department directive specified that Military Sealift Command (MSC) would "create a force of ships which will support the unit equipment for a modified Marine Amphibious Brigade, fuel, water, Air Force ammo for several tactical squadrons plus Army ammo plus supply support for 15 days."¹¹ By August 1980, seven ships of the newly created Near-Term Prepositioning Force (NTPF), chartered by the Military Sealift Command, were on station at the Indian Ocean island of Diego Garcia. By 1985, the NTPF had grown to 15 vessels.¹² The MPS ships were divided into three squadrons by geographic area, each with three ships: MPS-1 was assigned to the European Command Area of Responsibility (AOR), MPS-2 to Central Command AOR and MPS-3 to the Pacific Command AOR. When called upon, the squadron would deploy and discharge the equipment in support of an operation. It is still done the same way except that with the enhanced MPF or MPF (E), which is the current MPF capability, each squadron received an additional ship carrying Naval Mobile Construction Battalion equipment, a 3800 foot expeditionary airfield constructed by linking steel matting, and a fleet hospital of 420 acute care beds.¹³

In Desert Shield/Desert Storm, the MPF provided the first truly capable force in Northern Saudi Arabia. In fact, the first battalion of the 7th Marine Expeditionary Brigade occupied its defensive positions within four days of arrival.¹⁴ The first nine MPF ships, off-loaded by the first week of September 1990, provided the equipment and sustainment for two-thirds of the Marine Corps forces ashore, as well as supporting some U.S. Army units. During the ramp up to the Gulf War, the Marine Corps off-loaded the equipment and supplies from all three MPF squadrons to

¹¹ Salvatore Mercogliano. "Military Sealift Command: Ships that Wait," available at <http://www.usmm.org>. Internet; accessed 9 February 2004.

¹² David F. Winkler. "Ten years ago, Half a World Away," *Sea Power*, May 2000, 23.

¹³ David S. Huff, "Situation Report: The MPF Ships Overseas Prepositioning"—Navy League of the United States Website, available at http://www.navyleague.org/seapower_mag/nov2001/situation_report.htm, Internet; accessed 31 March 2004.

¹⁴ "Maritime Prepositioning...Yesterday, Today and Tomorrow," Colonel Carl D. Matter, Naval War College Monograph. 7 April 2003.

provide the bulk of the combat power required during the first thirty days of force closure and crisis response.”¹⁵

On 7 August 1990 Maritime Preposition Squadron’s Two and Three, referred to as MPSRONS, were alerted for possible deployment for the first ever wartime test of the Afloat Prepositioning Force.¹⁶ On 15 August 1990 Maritime Preposition Squadron-2 (MPSRON-2) vessels arrived at Al-Jubayl, Saudi Arabia and began unloading the equipment belonging to the Seventh Marine Expeditionary Brigade. On 25 August 1990 MPSRON-3 arrived in Saudi Arabia as well. Later, as the theater developed, MPRSON-1 arrived on 13 December 1990 to support II MEF forces out of Camp Lejeune North, Carolina. The contribution to Desert Shield/Desert Storm was considerable. On their first voyages, serving in their prepositioning role, the APF ships delivered 281,305 tons of unit cargo to the AOR of which 164,268 tons were provided by the Maritime Prepositioning Ships.¹⁷

The Operation Desert Shield deployment was hailed a triumph for the program, and in large measure, it was a tremendous success. As we shall see however, it was not without its problems. A Government Accounting Office study found that the concept worked to a degree: equipment and supplies were delivered to Saudi Arabia eight days after the war began and almost two weeks before they could have been sea lifted from the United States. However, some of the supplies most needed by the Marine Corps were not on the ships, and systems to track supplies were inadequate.¹⁸

¹⁵ Colonel Carl D. Matter. “Maritime Prepositioning...Yesterday, Today and Tomorrow,” Naval War College Monograph. 7 April 2003.

¹⁶ James K Matthews and Cora J Holt, *So Many, So Much, So Far, So Fast, United States Transportation Command and Strategic Deployment for Operation Desert Shield/Desert Storm*, Joint History Office. Office of the Chairman of the Joint Chiefs of Staff and Research Center, US Transportation Command 1996,118.

¹⁷ James K. Matthews and Cora J. Holt, *So Many, So Much, So Far, So Fast, United States Transportation Command and Strategic Deployment for Operation Desert Shield/Desert Storm*, Joint History Office. Office of the Chairman of the Joint Chiefs of Staff and Research Center, US Transportation Command 1996, 119.

¹⁸ United States General Accounting Office. Desert Shield and Desert Storm reports and testimonies: 1991-1993. March 1994, available at www.gao.gov Internet; accessed 23 January 2004.

In the period following the Gulf War the Department of Defense conducted a study on the mobility requirements the nation faced in the post-cold war era. To ensure that sufficient mobility assets would be available to support contingencies in the post-cold war environment, Congress directed the Department of Defense (DOD) in fiscal year 1991 to assess both inter-theater (from one theater of operations to another) and intra-theater (within the same theater of operations) lift requirements and develop an integrated plan to meet them. In its 1992 Mobility Requirements Study and 1995 Mobility Requirements Study Bottom-Up Review Update, DOD addressed the inter-theater portion of the directive.¹⁹ These studies, known collectively as MRS BURU, called for the United States Army to become heavily involved in the prepositioning of supplies and equipment afloat. The studies recommended acquiring an additional 5 million square feet of shipping capacity, both to preposition equipment for an Army heavy brigade and to augment surge shipping capability, in order to meet the objective of deploying a Army heavy corps within 75 days.²⁰ More specifically, the report directed the Department of Defense:

- a. to acquire additional sealift capacity equal to 20 Large, Medium-Speed Roll-on/roll-off Ship (LMSRs). In addition, to lease two container ships for prepositioning.
- b. to deploy (by FY 1997) an afloat prepositioned package of approximately 2 million square feet of Army combat and combat support equipment. This package was to be carried on nine LMSR's in the prepositioning configuration.
- c. to provide an adequate capability to respond in force within the first two weeks to any regional crisis.
- d. to add (by FY 1999) 3 million square feet of surge sealift capability for the rapid deployment of Army divisions and support from the United States. This capability was to be provided by 11 of the LMSRs in high readiness.
- e. to expand (by FY 1999) the Ready Reserve Fleet (RRF) from the existing to 142 ships and to increase the readiness of the fleet.
- f. to continue the C-17 program to improve the airlift component of strategic mobility.²¹

¹⁹ Ibid.

²⁰ Department of Defense. 1995 Annual Defense Report, Part VI, Mobility Forces, available at <http://www.defenselink.mil/execsec/adr95/mobility5.html>, Internet; accessed 9 February 2004.

²¹ Major Dennis Ray, USMC. "DOD Prepositioning- A Growth Industry," United States Marine Corps, Command and Staff College. Quantico Virginia 1995.

In order to give some perspective, one MPF class of ship has 152,000 square feet of storage, the equivalent of just over three and one-third American football fields.

With funding for 18 ships and a mission to put two brigades' worth of gear aboard the Large Medium Speed Roll-On, Roll-Off (LMSRs), Army Prepositioned Stocks 3 (APS-3) was established.²² Insofar as there are now two afloat preposition capabilities in the DOD, a comparison is in order to see if there are significant enough differences to justify two different programs. On the surface these programs would be a lucrative target for those who are concerned with finding efficiencies and saving money within the Department of Defense. After all, the ships are quite similar and the mission to get a mechanized brigade into the fight quickly is the same, so is there a rationale to have both Afloat Prepositioning programs? An inspection of the two programs reveals that they have a few similarities but significantly more differences in their capabilities and their equipment. Tanks and HMMWV's are the same but since the Marine Corps' transition to the seven-ton MVTR even the trucks are different. Additionally the artillery systems differ significantly. The MPF has towed 155mm M198s while the APF has self-propelled 155mm Paladins. Further, Marines use Amphibious Assault Vehicles (AAV's) to mechanize infantry units, while the Army uses both the Bradley Fighting Vehicle (BFV) and the M113 armored personnel carriers (APC's). A study commissioned by the USMC and conducted by LOGICON Corporation found that:

“... at present a basic conceptual difference remains. The Army appears to place most emphasis on delivering the entire combat capability to the CINC as rapidly as possible. The Marine Corps, on the other hand, continues to stress expeditionary warfare and operational flexibility. It has retained the ability to deliver the entire MEB, but it has invested heavily in planning for and configuring the equipment aboard the ships to allow flexible responses by MAGTF's to a variety of inevitable but as yet unknown contingencies which will face CINC's [sic]. Both programs are flexible and focus on

²² The APS-2 assets are in Livorno, Italy and APS-5 resides in Kuwait. APS-3 added pre-positioned assets at sea. For more information on Army pre-positioning go to <http://www.globalsecurity.org/military/agency/army/aps-3.htm>. as well as the Fort Lee website at www.lee.army.mil or Fort Eustis at www.eustis.army.mil.

CINC [sic] requirements, but they reflect different operational emphases.²³

A Center for Naval Analysis (CNA) study echoed that finding in their 1995 report. They found that “The MPF and APA are designed to meet different priorities, and they have different strengths. We believe they are basically complimentary for large contingencies in which all rapidly deployable forces will be required. The APA will provide a heavy brigade and significant sustainment and logistics while the MPF will provide a sizeable general purpose force.”²⁴ Time will tell if these differences remain when the Army makes the transition to the “flotilla” system which will be discussed in chapter two.

Although too soon to draw significant conclusions, it appears that the employment of both programs during Operation Iraqi Freedom marked an important evolutionary step in the Sea basing concept. Despite the past successes these programs have achieved, they do not represent a truly sea-based capability. Although we can get to a conflict fast with a staggering amount of equipment, we still need a benign port and a nearby airfield to build a lodgment. Marine Major Geoffrey Stokes, a logistician, pointed out the continuing need for development in his Naval War College monograph. He stated that today’s logistical platforms, such as the Combat Logistics Fleet (CLF), MPF and Joint Logistics Over the Shore (JLOTS) have been proven individually, but the combined strengths of these ships as sea based logistical platforms are limited. While they do provide a centralized base for control of operational logistics within the theater and a co-location of logistical planners more than a few limitations exist. The weaknesses include:

- a. an inability for cross-decking or inter-ship transfer of supplies
- b. an inability to receive, and process for distribution, follow-on containerized cargo
- c. a lack of dedicated fast ship-to-objective delivery vehicles
- d. a lack of ground equipment maintenance capabilities

²³ Study Support for Comparing the US Army APS and USMC MPF Programs, 8 February 2001. Contract Number GS-23F-8024H, Order M00027-01-F-2508.

- e. an inability to support multi-helicopter operations
- f. an inability to receive military transport aircraft ²⁵

Force closure and power projection programs like MPF and APS enable the United States to get a great deal of war waging equipment to the fight more rapidly than has ever been done before. But it is also true that in every case in which afloat-prepositioned assets have been used, a benign port was available to offload and the area around the port was secure enough for the ships to enter the harbor safely. Additionally, a suitable airfield was nearby to support the link-up of troops who would fly in to operate the equipment the ships delivered. The goal of the sea-base is to be able to affect the enemy and impose the nations will without these advantages. Ideally, using the sea as maneuver space will make our forces less predictable and more lethal. Chapter two will discuss the latest aspirations to make that vision a reality.

CHAPTER TWO- Near Term Programs

There are several initiatives underway that are either explicitly labeled a sea-based concept or whose premise is dependent on the sea-based capability. In a document called Sea Power 21, Admiral Vern Clark, Chief of Naval Operations, described the future of the nation's naval capability. Sea Power 21 aspires to "align our efforts, accelerate our progress and realize the potential of our people. Sea Power 21 will guide our Navy as we defend our nation and defeat our enemies in the uncertain century before us."²⁶ It also "reinforces and expands concepts being pursued by the other services ... to generate maximum combat power from the joint team."²⁷ It should be noted that when Admiral Clark refers to the "Navy," the implication is that he is referring to all naval forces, including Marine Corps forces, and how his vision addresses the

²⁴ Analytical Comparison of MPF and APA Programs, Anthony Jareb. Report number CAB-95-2 Annotated Briefing, Center For Naval Analyses. Alexandria, Virginia, February 1995.

²⁵ Major Geoffrey W. Stokes, USMC "Sea-Based Logistics: A Concept Just Over the Horizon," 13 June 1997 Naval War College, Newport, Rhode Island.

²⁶ Admiral Vern Clark. "Sea Power 21, Projecting Decisive Joint Capabilities," *Proceedings*, October 2002, 33.

²⁷ Admiral Vern Clark. "Sea Power 21, Projecting Decisive Joint Capabilities," *Proceedings*, October 2002, 41.

joint community as well. The capabilities addressed in Sea Power 21 are designed to continue the evolution of U.S. naval power; “progressing from the blue-water, war-at-sea focus, to emphasis on the littoral waters and then to a broadened strategy in which naval forces are fully integrated into global joint operations against regional and transnational dangers.”²⁸ Admiral Clark states that three fundamental concepts lie at the heart of the Navy's continued operational effectiveness: Sea Strike, Sea Shield, and Sea Basing. Sea Strike is the ability to project precise and persistent offensive power from the sea; Sea Shield extends defensive assurance throughout the world; and Sea Basing enhances operational independence and support for the joint force. These concepts build upon the solid foundation of the Navy-Marine Corps team, leverage U.S. asymmetric advantages, and strengthen joint combat effectiveness.²⁹

Essentially, Sea Power 21 calls for establishing a sea-base because sea-based forces enjoy advantages of security, immediate employability, and operational independence. All naval programs should foster these attributes to the greatest extent feasible. This means transforming shore-based capabilities to sea-based systems whenever practical, and improving the reach, persistence, and sustainability of systems that are already afloat.³⁰

Operational Maneuver from the Sea (OMFTS) is a capstone Marine Corps concept of how maritime forces will be employed in the not too distant future. It is directly linked to Sea Power 21. OMFTS and its counterpart, Ship to Objective Maneuver (STOM), published as “white-papers” capture the notion of how a sea-based force can prosecute part of a campaign. The heart of OMFTS is the maneuver of naval forces at the operational level, “a bold bid for victory that aims at exploiting a significant enemy weakness in order to deal a decisive blow.”³¹ Taking the operational maneuver space offered by the sea, U.S. forces turn the sea and littorals into

²⁸ Ibid.33

²⁹ Admiral Vern Clark. “Sea Power 21, Projecting Decisive Joint Capabilities,” *Proceedings*, October 2002, 34.

³⁰ Ibid, 37.

vulnerable flanks for potential enemies, assailable at the time and place of the naval commander's choosing.³²

Vitally important to this idea is that there will no longer be a pause at the beach to establish a lodgment that permits subsequent operations ashore. The vision involves maneuvering off the coast, over the horizon, and striking directly to the objective from the sea rather than from the sea to the beach to the objective. "Freed from the constraints of securing a large beachhead, the commander will be able to focus on the enemy and begin the landing force's maneuver from over the horizon."³³ The advancements in the expeditionary fighting vehicle (EFV) (formerly known as the Advanced Amphibious Assault Vehicle or (AAAV), the Short Take-Off Vertical Landing (STOVL) version of the Joint Strike Fighter and improved Landing Craft Air Cushion (LCAC), not to mention the MV-22 Osprey tilt rotor airplane/helicopter, all contribute to realizing this concept.³⁴

The emergence of these doctrines resulted from an analysis of political reality as well as geography. OMFTS was produced to contend with the world's littoral regions; those areas that are adjacent to the water. While representing a relatively small portion of the world's surface, littorals provide homes to over three-quarters of the world's population, locations for over 80 percent of the world's capital cities, and nearly all of the marketplaces for international trade. Because of this, littorals are also the place where most of the world's important conflicts are likely to occur.³⁵ Most of the areas of instability and social strife today are in major cities and urban areas that are most easily accessed by seaward approaches. In fact, 60 percent of the politically significant urban areas around the world are located within 25 miles of the coastline; 75 percent

³¹ Department of the Navy, *Operational Maneuver from the Sea*, Marine Corps Combat Development Command Quantico, VA 22134, 4 January 1996, V-9.

³² Department of the Navy. *Ship to Objective Maneuver*, Marine Corps Combat Development Command Quantico, VA 22134, 25 July 1997, II-3.

³³ Ibid. II-4

³⁴ These programs are essential to the future of the Marine Corps; more information can be obtained by reading the OMFTS and STOM white papers as well as on the USMC homepage, www.usmc.mil.

³⁵ Department of the Navy. *Operational Maneuver from the Sea*, Marine Corps Combat Development Command Quantico, VA 22134, 4 January 1996, V-4.

are located within 150 miles. The Navy's strategic vision document "*From the Sea*" published in 1992 and subsequently updated, defines littoral as the "near land" areas or coastlines of the world.³⁶ It is comprised of two segments of the battlespace: Seaward—covering the area from the open ocean to the shore—and Landward—covering the area inland from the shore that can be supported and defended directly from the sea.³⁷

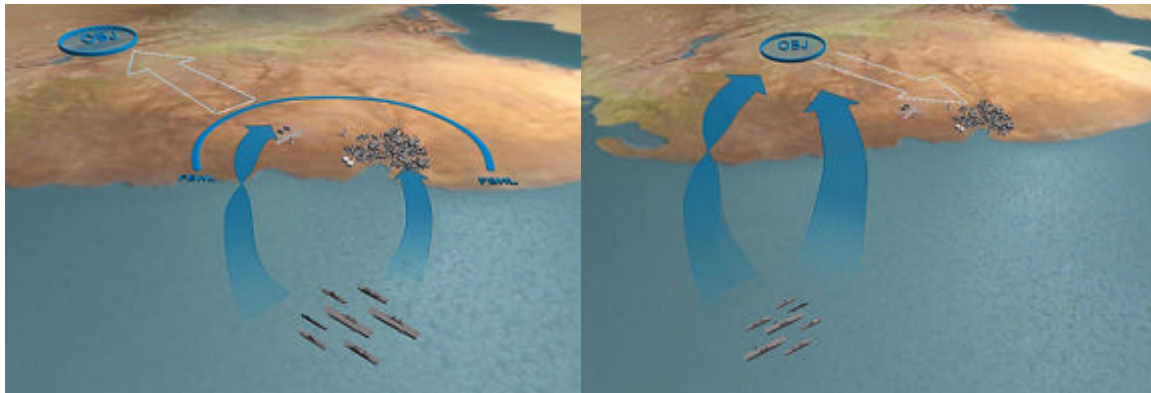
The Marine Corps White Paper *Operational Maneuver from the Sea*, published in 1996, states: "To influence events overseas, America requires a credible, forwardly deployable, power projection capability. In the absence of an adjacent land base, a sustainable forcible entry capability that is independent of forward staging bases, friendly borders, overflight rights, and other politically dependent support can come only from the sea."³⁸

The tactical application of OMFTS is found in the doctrine described in *Ship to Objective Maneuver* (STOM), another USMC white paper. STOM takes advantage of the emerging mobility systems discussed above to maneuver landing forces in their tactical array from the moment they depart the ships, replacing the ponderous ship-to-shore movement of current amphibious warfare with true amphibious maneuver. By executing ship-to-objective maneuver, landing forces will exploit advanced technologies that will permit combined arms maneuver from over-the-horizon attack positions through and across the water, air, and land of the littoral battle space directly to inland objectives. STOM provides the opportunity to achieve tactical as well as operational surprise, something seldom possible in past amphibious operations. Operations will begin from over the horizon and project power deeper inland than in the past, progressing with the speed and flexibility of maneuver that will deny the enemy warning and reaction time. The

³⁶ *Forward... From the Sea*, Department of the Navy Posture statement, available on line at <http://www.chinfo.navy.mil/navpalib/policy/fromsea/pos98/opening.html>, Internet; accessed 15 March 2004.

³⁷ LCDR Frank J. Murphy, "Littoral Warfare: Adapting to Brown Water Operations," a monograph, United States Navy. Naval Command and Staff College 1993. available at <http://www.globalsecurity.org/military/library/report/1993/MFJ.htm>, Internet; accessed 13 March 2004.

images below illustrate the evolution that OMFTS and STOM will enable. The first image depicts how we presently conduct amphibious operations. The second image depicts how the emerging technologies and doctrine will enable the STOM portion of OMFTS.³⁹



Where we are

Where we are headed

A historical vignette that can be used to describe how OMFTS is envisioned can be found in the opening months of the Korean War.

The capture of Seoul was a classic example of an Operational Maneuver from the Sea. It was a completely focused operation, unified under a single commander, which flowed coherently from San Diego, Sasebo, and Pusan, through an amphibious power projection at Inchon, to key objectives well inland. The Seoul operation was focused on a critical North Korean vulnerability, the lines of support (and withdrawal) through the Han River Valley at Seoul. It maintained that focus and with it an unmatched tempo of aggressive action. As a result, it was crushingly successful, leading to the destruction of the North Korea Army and the liberation of South Korea. If the operation had lost focus, however, and been planned and executed as merely an amphibious lodgment at Inchon, it would have generated only an operationally insignificant tactical “victory.”⁴⁰

Although there was subsequent build-up on the beach, the assault progressed to Seoul without the normal process of building the lodgment before pressing the attack. Each of the initiatives in this chapter relies upon a better sea-based capability than we currently possess. The Marine Corps’ answer can be found, partly, in the Maritime Prepositioned Force (Future) or MPF(F).

³⁸ Department of the Navy. *Operational Maneuver from the Sea*, Marine Corps Combat Development Command Quantico, VA 22134, 4 January 1996, V-4,V-5.

³⁹ Department of the Navy, *Ship-To-Objective Maneuver*. Marine Corps Combat Development Command Quantico, VA 22134, 25 July 1997, 25 July 1997, II-7.

⁴⁰ Ibid. V-12.

The MPF(F) will contribute to the forward-presence and power-projection capabilities needed to support the future MPF/OMFTS operations. The MPF(F) ships will have the following capabilities:

- a. Force closure: MPF(F) ships will provide for the enroute arrival and assembly of the prepositioning force. Marines will deploy via a combination of surface craft and strategic, theater, and tactical airlift aircraft to rendezvous with the prepositioning platforms while enroute to the operating area.
- b. Amphibious Task Force (ATF) Interoperability: MPF(F) ships will enhance OMFTS effectiveness by using selective offload capabilities to reinforce the assault echelon of an ATF. Within the overall power-projection mission, MPF(F) ships will be able to interface with the ATF and should also be able to interoperate with, and potentially provide maintenance support for, ATF aircraft, assault craft, and advanced amphibious assault vehicles.
- c. Sustainment: MPF(F) ships will contribute to sustainment by serving as a sea-base for logistics support. These ships are expected to employ an automated inventory-management system that can receive, store, maintain, manage, and deploy the equipment and supplies required for the sustained logistics support of naval operations.
- d. Reconstitution and redeployment: MPF(F) ships will conduct in-theater, at-sea reconstitution and redeployment without the requirement for extensive material maintenance or replenishment at a strategic sustainment base. The ability to rapidly reconstitute the MPF Marine Air Ground Task Force (MAGTF) will permit immediate employment in follow-on missions.⁴¹

The MPF(F) will be part of a larger naval element, the Expeditionary Strike Force (ESF) that includes the amphibious shipping contained within the Expeditionary Strike Group (ESG). The relationship between the ESF, the Carrier Strike Group (CSG), the ESG and the MPF(F) is complimentary and mutually supporting. While the combat capability of the ESG provides the forcible entry capability, the MPF(F) gives the assault force its “staying power.” The MPF(F)’s ability to reconstitute at sea and selectively offload equipment can sustain forces ashore indefinitely. Using the MV-22 Osprey, a tilt rotor airplane/helicopter hybrid, the Expeditionary Fighting Vehicle (EFV), and the advanced LCAC, the MPF(F) can loiter over the horizon and sustain the fight without putting a large logistical footprint ashore, thus avoiding the creation of

the “iron mountain” that both enabled combat operations and inhibited them by interfering with the momentum achieved in the assault phase.⁴²

MPF(F) bears a resemblance to existing amphibious capability such as a Marine Expeditionary Unit (MEU) or a Marine Expeditionary Brigade (MEB). In the past, amphibious and MPF operations were distinct actions. The MEU or MEB would secure the port and adjacent airfield for the unloading of equipment and to facilitate the arrival of troops. In the future these will be conducted concurrently. While it may appear that the amphibious ships and the MPF(F) are performing similar tasks, it should be noted that they are executing complimentary missions. The “amphibs” are and will be manned by US Navy personnel, are optimized for forcible entry, possess limited sea-based maintenance/supply/medical capabilities, land forces for extended operations ashore, are combat loaded, aviation configured, and have forces embarked for long duration.⁴³ The MPF(F), on the other hand, will be optimized for rapid reinforcement, crewed by civilian mariners, project forces ashore, support from sea-base, have less survivability, are designed for selective offload, are aviation capable (vice aviation configured)⁴⁴ and have forces embarked for short duration. The MPF(F), most importantly, provides sea-based maintenance, supply and medical capabilities much more adeptly than the current MPF. It should be noted that the MPF(F) is envisioned as a national asset, just as the MPF is now. The MPF(F) is also anticipated to be a joint capability for all of DOD to utilize.⁴⁵

⁴¹ David S. Huff, “Situation Report: The MPF Ships Overseas Prepositioning,” Navy League of the United States Website, available at http://www.navyleague.org/seapower_mag/nov2001/situation_report.htm, Internet; accessed 11 February 2004.

⁴² Maritime Preposition Force (Future) brief to the Second Marine Expeditionary Force 6 August 2003. CD obtained from MSgt Carrion, II MEF Maritime Prepositioning Force Staff Non- Commissioned Officer, 9 January 2003 Camp Lejuene, North Carolina.

⁴³ Ibid.

⁴⁴ This means that the MPF will have the ability to receive and launch aircraft but the ships will not have embarkation space for the aircraft to be stored on ship as they are now with the amphibious fleet.

⁴⁵ Maritime Preposition Force (Future) brief to the Second Marine Expeditionary Force 6 August 2003. CD obtained from MSgt Carrion, II MEF Maritime Prepositioning Force Staff Non- Commissioned Officer, 9 January 2003 Camp Lejuene, North Carolina.

The implementation of seabasing with MPF(F) is dependent upon high-speed, reliable and survivable surface craft and aircraft able to deliver logistics support where and when needed. The new Heavy Lift Landing Craft Air Cushion (HLAC), a newer, more powerful Landing Craft Utility (LCU(R), replacing the aged LCU 1600 that has been in service since the 1970's , and the employment of the MV-22 and other improved air assets will answer this requirement. Examples of other logistics innovations the Navy and Marine Corps are exploring include unmanned delivery systems, advanced lighterage, containerization, predictive maintenance, and standardization of equipment.⁴⁶ An additional part of the concept for sustaining the MPF(F) involves the high speed vessel or HSV.

While the HSV is not large enough to replace the Combat Logistics Force (CLF), on which the current Navy and future MPF(F) rely for sustainment, it is a recent innovation that is being employed right now. The HSV is capable of transporting approximately 1,000 passengers in comfortable reclining seats, along with more than 400 tons of cargo. The cargo deck can easily hold the numerous supplies, trucks, combat vehicles, tractor-trailers, water tankers, and other equipment needed by a Marine battalion.⁴⁷ The HSV can sustain speeds in excess of 38 knots in Sea State three when loaded with troops and equipment with a range of 1,100 nautical miles.⁴⁸ It has a range of over 4,000 nautical miles at an average speed of 20 knots.⁴⁹

According to Marine LtCol. Kenneth R. Martin, III Marine Expeditionary Force HSV Project Officer, the HSV is a transformation from how the Marine Corps has deployed in the past. The

⁴⁶ Maritime Prepositioning Force (Future) MPF (F) / Sea base. available at <http://www.globalsecurity.org/military/systems/ship/seabase.htm> , Internet ;accessed 13 March 2004.

⁴⁷ Austal Unveils High Speed Military Vessel. Highly Capable, Multi-role Catamaran is purpose designed for defence duties 20 May 2003, available at http://www.austal.com/investor/article.cfm?news_id=60 Internet; accessed 13 March 2004.

⁴⁸ Sea State three occurs when waves are between 3.5 and 4 feet according to the Pierson-Moscowitz scale. More information can be found at <http://www.oceandata.com/support/Sea%20State%20Table.htm>.

⁴⁹ Austal Unveils High Speed Military Vessel. Highly Capable, Multi-role Catamaran is purpose designed for defence duties 20 May 2003,available at http://www.austal.com/investor/article.cfm?news_id=60, Internet; accessed 13 March 2004.

normal transit from Okinawa to Korea aboard ferry or amphibious shipping would take two to three days. Moving a Marine infantry battalion by air would take up to 17 days. "With use of the HSV, a battalion-sized unit with all associated vehicles and equipment can travel to its destination in one HSV run and arrive within 22-31 hours throughout most ports in the [Pacific] Area of Responsibility."⁵⁰ During 2002, the HSV was deployed for 270 days transporting 18,007 passengers, 1,705 vehicles, 31 helicopters, and 1,895 containers, with a total of 12,830 short tons of equipment transported. Excluding weather delays, the HSV enjoyed a 99 percent underway reliability factor.⁵¹ Other examples of the HSV's utility in the III MEF Area of Responsibility (AOR) include transporting a 400-ton load to include 370 Marines and their camp gear, five Cobra helicopters, two Huey helicopters and aviation ground support equipment from Japan to Guam within 40 hours, far more quickly and less expensively than if moved by airlift. In an operation in October 2002 more than 700 Marines and their equipment, including Humvees, were landed at Yokohama North Dock after being transferred from Okinawa onboard the catamaran *Austal*. The Marines, from the 1st Battalion, 6th Marines were on their way to a two-week stint at Camp Fuji. The HSV "*WestPac Express*" accomplished the task in about 30 hours. Previously III MEF would have used two C-17 transport aircraft and taken up to 20 days and 20 separate lifts to accomplish the same objective.⁵² The HSV enables the Marines to maintain unit integrity by moving all the Marines and the equipment from one infantry battalion in one lift. Typically the load and unload times took about one hour.⁵³ Lt. Gen. Wallace C. Gregson, the Commanding General of III MEF and US Marine Corps Forces Japan, said of the HSV, "We participate in approximately 70 exercises a year. The HSV enables III MEF to deploy to more places, in a

⁵⁰ United Nations Command, United States Forces Korea, Combined Forces Command News Release No. 030607. U.S. Marines depart Pohang in High Speed Vessel. 24 June 2003, available at <http://www.korea.army.mil/pao/news/030607.htm>, Internet; accessed 10 February 2004.

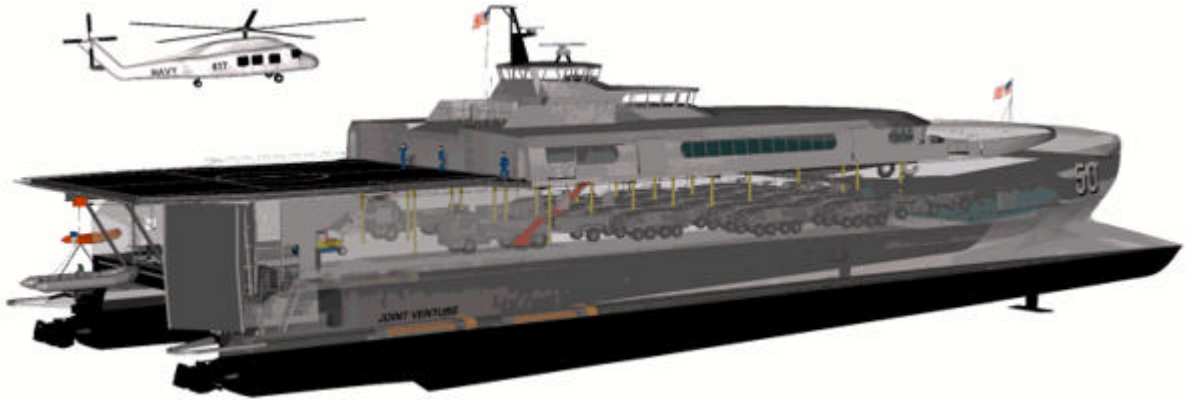
⁵¹ Ibid.

⁵² Ibid.

⁵³ High Speed Vessel (HSV): Adaptability, Modularity and Flexibility for the Joint Force, available at http://www.nwdc.navy.mil/Concepts/Sea_Basing/ConceptsHSV.aspx, Internet; accessed on 13 Mar 2004.

shorter amount of time and costs us less than other forms of transportation. We can deploy with our equipment to places as far away as Australia and be ready to operate when we get there.

Nobody moves faster than III MEF. "⁵⁴



(Figure 1- drawing of the HSV)⁵⁵

The HSV has a variety of roles in the sea base. As it stands, it is a potent shore-to-shore asset which reduces reliance on strategic airlift. In the future it will retain that role, as well as be an important sea-base-to-shore platform. The HSVs ability to carry a heavy payload and quickly deliver it to the shore will enable greater exploitation of the sea base by permitting the larger vessel to remain over the horizon while the HSVs move quickly in and out of the AO. The possibilities of the HSV are further defined by the Marine Corps' Expeditionary Force Development Center Concepts Overview 2004. They describe the potential (as well as actual) roles of the HSV this way:

At -Sea Maneuver of a Marine Air Ground Task Force (MAGTF):

- a. Exploit successes, avoid crowded Main Supply Routes, increase op-tempo and enable rapid, bold maneuver

⁵⁴ "Austal HSV. The First to Fly the Stars and Stripes. Transformational "WestPac Express " Keeps Marines Moving keeps Marines moving fast", available at http://www.austal.com/investor/article.cfm?news_id=73 Internet; accessed 11 March 2004.

⁵⁵ Ibid.

- b. Provides complementary capability to amphibious and MPF ships
- c. Conducts operational maneuver of MAGTF combat and Combat Service Support units using the sea as maneuver space

Intra-Theater Movement of MAGTF:

- a. Theater-based and self-deploying HSV's transport MAGTF assembled at base or Intermediate Staging Base (ISB)
- b. Offload capability in austere ports
- c. Support forward engagement, early entry, reinforcement, and Military Operations Other Than War (MOOTW) missions

MPF(F) Support:

- a. 6 HSV's assigned to MPF(F)
- b. In-theater and self-deploying HSV's from CONUS support MPF MAGTF
- c. HSV's provide additional option for transport of Fly-in-Echelon (FIE) either from CONUS or ISB/Emergency Resupply Point (ERP) to marry-up with MPF(F) platforms at the sea-base
- d. Provide additional long-distance transport capability to support MAGTF employed from MPF(F):
 - 1. To/From the sea-base
 - 2. Shore-to-shore in the AO
 - 3. ISB to the AO
 - 4. Augments lighterage for in-stream offloads

CSS Applications:

- a. Movement of CSS functions to support the Naval Forces
- b. In-theater distribution
- c. Casualty evacuation
- d. End item evacuation
- e. Refugee/POW evacuation⁵⁶

⁵⁶ Marine Corps Combat Development Command. Marine Corps' Expeditionary Force Development Center Concepts Overview 2004, compact disk.

The HSV is a capable platform now and will play a role in the future deployments for all of the services. Its usefulness will perhaps be proven, as part of the U.S. Army's afloat prepositioning transformation.

As a result of Operation Iraqi Freedom, the United States Army is reorganizing their Afloat Prepositioning Stocks into what is being termed the Army Regional Flotilla. In OIF, the 3d Infantry divisions three brigades used 27 battalions of equipment from sites in Qatar and Kuwait as well as from APS-3, the sea based unit. Included in that total was approximately 252 M1A1 tanks, 325 M2 Bradley Fighting Vehicles, 18 Multiple Launch Rocket Systems and 56 Paladins.⁵⁷ Based on lessons from the operation, the Army is now instigating major changes in the way it positions this equipment. While blueprints for the land based stocks are still under review, the service has already begun to convert its single "afloat" unit into three separate packages called the Army Regional Flotilla (ARF).⁵⁸ The term "Flotilla" refers to a small cluster of ships. In total these sea-based assets would comprise 12 ships; four ships in three different locations: the Indian Ocean, Pacific Ocean and Mediterranean Sea. Each flotilla's combat set will be configured with one infantry and one armor battalion per ship. This represents a reduction in combat power but an increase in Humanitarian Assistance/Disaster Relief capability that better addresses the growing role of stability and support operations.⁵⁹ Upon arrival to the Joint Operations Area (JOA), an ARF will provide the JTF commander with a suite of capabilities that cover the full spectrum of operations from humanitarian assistance/disaster relief, to peace operations, to smaller scale contingencies up to major combat operations.⁶⁰ Of the new flotillas, one brigade

⁵⁷ Emily Hsu, "Army Revamps Global Positioning Strategy Based on Recent Wars" *Inside the Army*, 23 February 2004, Volume 16, number eight.

⁵⁸ Ibid.

⁵⁹ Ibid.

⁶⁰ Department of the Army Mobility Office DAMO-SSW. Memorandum for Joint Staff, J-4 attn: LTC Mark Ulrich, USA, by Larry Guderjohn.

combat team set is already on-station. The second BCT is due to be in place by May 2004, while the third will likely be ready in fiscal year 2005.⁶¹

Before we examine what is being proposed as potential sea-based platforms in the more distant future, there are issues that must be confronted when, and if, the true sea-base comes to fruition.

CHAPTER THREE-Considerations

The sea base represents a quantum leap in capability that will enable a broad range of options across the spectrum of military operations. Its implementation requires that some issues be addressed and mitigated. Two of the more important issues are questions about force protection and interoperability between joint and combined partners. One of the arguments for the implementation of the sea-based concept is how it improves our position against asymmetric threats. The infrastructure of 20th century combat power—large dumps of fuel and ammunition, ships waiting for days to unload their cargoes, and crowded assembly areas—are lucrative targets for the weapons of the 21st century. At the same time, landing forces armed with the command and control, tactical mobility, and fire support capabilities of the present will be hard pressed to decisively engage an enemy who is likely to combine the destructive capability of a conventional force with the elusiveness of a guerrilla.⁶²

Risk management is an important dimension of operational planning, and sea-based assets mitigate risk. Sea-based forces are easier to protect from immediate tactical and terrorist threats than forces at similar-sized bases on foreign soil. Fewer security personnel and less logistics support translate into a smaller footprint ashore. Although it will not eliminate all shore-based combat support functions, Sea Basing potentially will reduce many of these ashore

⁶¹ Emily Hsu, "Army Revamps Global Positioning Strategy Based on Recent Wars" *Inside the Army*, 23 February 2004, Volume 16, number eight.

requirements.⁶³ Major Geoffrey Stokes stated in his Naval War College paper that “The sea based logistics concept is a defensive measure in and of itself, by removing materiel from land and reducing any targets of opportunity of large shore based logistical footprint from any local threat ... However, active defensive measures such as mobile small boat security forces, Naval warships, and platform close-in missile defense mechanisms should not be beyond reasonable expectations.”⁶⁴

On balance, it seems that the sea base indeed alleviates some force protection concerns. Removing the “footprint” of the land force to a mobile site at sea and over the horizon eliminates a great concern, as the sea-based force is less of a target for conventional and unconventional threats ashore. The reduced or eliminated footprint also translates into more combat power, as there is a decreased requirement to dedicate security or reaction forces to the lodgment’s protection.

Worth considering, though, is that at the other end of the spectrum, the move to the sea base presents a rich target to an aggressor. Images of the USS Cole are difficult to shake. Though easily attacked while at anchor in Aden, Yemen, on 12 October, 2000 any adversary will know that a blow to any US ship, especially one with a substantial amount of combat power inside the skin has significant, perhaps strategic, impact.⁶⁵ The loss of the HMS *Atlantic Conveyor* during the Falklands is another, perhaps better example of what can be lost if a capital ship loaded with materiel is sunk by enemy action. In that case British forces were required to move overland by foot over the difficult terrain and bad weather of East Falkland instead of using the helicopters that went down on the *Conveyor*.⁶⁶

⁶² Department of the Navy. *Operational Maneuver from the Sea*, Headquarters United States Marine Corps. Washington, D.C., 4 January 1996.

⁶³ Lieutenant Commander John J. Klein, U.S. Navy, and Major Rich Morales, U.S. Army “Sea Basing Isn’t Just about the Sea” *Proceedings*, January 2004, 35.

⁶⁴ Major Geoffrey W. Stokes, USMC “Sea-Based Logistics: A Concept Just Over the Horizon,” 13 June 1997, Naval War College, Newport, Rhode Island.

⁶⁵ Navy Office of Information, available at www.chinfo.navy.mil/navypalib/news/news_stories/cole.html Internet; accessed on 13 March 2004.

⁶⁶ Mark Adkin, *Goose Green: A Battle is Fought to be Won* (London, Cassell & Co, 1982), 103.

Another concern to be addressed is the diplomatic impact of a capable sea-base. The United State's inability to convince some of our allies, notably Germany and France, to join the coalition against Saddam Hussein led some to express the opinion that the United States acted unilaterally in the war against Iraq. Will a sea-base create similar perceptions in the future? In the past, the basing of forces at sea has supported and enhanced diplomatic effectiveness. Indeed, a large sea-based force off a nation's coast can be a powerful means of coercion, and demonstrates U.S. commitment in a region. The deployment of an aircraft carrier in the straits of Taiwan to counter the saber rattling of the mainland Chinese is an example. In addition, having combat forces based in a maritime environment mitigates many cultural sensitivities that are exacerbated when ground forces are placed in unwelcoming locales. Keeping U.S. forces near a potential crisis area though sea basing reduces the observable U.S. public presence to local inhabitants. As previously discussed, sea-based forces would be more difficult targets for terrorists to attack using traditional methods. Consequently, Sea Basing, once fully deployed and developed, could help solidify stable relations between the United States and its allies. Despite many benefits, however, there also are potential pitfalls.⁶⁷

General James L. Jones, Commander, United States European Command (EUCOM) and Supreme Allied Commander Europe (SACEUR), suggested recently that new NATO members develop niche capabilities such as nuclear, biological and chemical detection and decontamination and focused logistics.⁶⁸ How can these contributions be made if we provide the preponderance of the force and are at sea? Traditionally, foreign forces have served alongside U.S. forces at land bases and facilities. Some foreign military members have served on board U.S. Navy ships, but this number has been quite small in comparison. Many countries in the world recognize they cannot build military forces on par with the United States because achieving such

⁶⁷ Lieutenant Commander John J. Klein, U.S. Navy, and Major Rich Morales, U.S. Army "Sea Basing Isn't Just about the Sea," *Proceedings*, January 2004, 35.

⁶⁸ "Where our concern should be" By Lyric Winnick *Parade*, 7 March 2004, 17.

parity would be fiscally burdensome. Other countries choose not to do so for a variety of other political or ideological reasons. Consequently, numerous nations grow increasingly wary of our sole superpower status. If we were to increase significantly our sea basing capability, some nations might become even more concerned about our apparent ability to fight and win conflicts decisively and unilaterally, without the assistance of the international community.⁶⁹

The sea base is being explored by other nations also. Most notable in this regard is the United Kingdom. At a sea-basing conference in London, 3-4 December 2003, The Royal Navy described that they primarily see the sea base exploited for its logistics potential. Not unlike our own view, they describe a world where host nation support is limited, access not assured, and where they might potentially reduce the footprint ashore. While they discuss the importance of interoperability between allies, there is not a great deal of detail given as to how that would occur. The same can be said for our own efforts. What they like about the concept is that it is scalable, flexible, dynamic and configurable to meet mission requirements. The phrase they use to describe the the joint sea base is that it is “a frame of mind, not a procurement dependent concept.”⁷⁰

Other than from the UK, there is not much information on any other nation developing the sea-base concept. Within NATO there has been some success in sharing the burden of sealift and that may serve as a starting point for an alliance capability, but as yet there is no multinational plan for seabasing.⁷¹ If our most enduring allies are not considering the sea base as part of their future, how will emerging nations contribute to a coalition led by the US operating from the sea?

⁶⁹ Lieutenant Commander John J. Klein, U.S. Navy, and Major Rich Morales, U.S. Army “Sea Basing Isn't Just about the Sea,” *Proceedings*, January 2004, 36.

⁷⁰ Richard Scott, “UK Looks to Develop Sea basing concept,” *Jane's Defence Weekly*, 10 March 2004.

⁷¹ Gunnar Borsch, Norwegian Navy, NATO Sealift Coordination Center Presentation, Afloat, Support, Sealift and Sea basing Conference. London, 3-4 February. Obtained from CD-ROM.

While discussing MPF(F) it was noted that one of its goals was to be able to conduct reconstitution at sea. It is very important to understand what reconstitution involves in order to grasp the benefits of doing it at sea. As it stands, each ship in the MPF program goes through a maintenance cycle every 36 months to ensure that the vehicles and equipment are in a ready-to-use condition. In Iraqi Freedom, 98.5 % of the gear offloaded for the war rolled off the ships and moved to receiving units, often over 50 miles away, without any maintenance problems or breakdowns.⁷² A recent GAO report (24 March 2004) states that the prepositioning programs of both the Marine Corps and the Army were used with great success but at a cost.⁷³

The Marine Corps used two of its three prepositioned squadrons (11 of 16 ships) to support OIF. As the Marines withdrew, they repaired some equipment in theater but sent much of it back to their maintenance facility in Blount Island, Florida. By late 2003, the Marine Corps had one of the two squadrons reconstituted through an abbreviated maintenance cycle, which merely brought it to a mission capable status, not its normal high standards, and sent it back to sea. One squadron's worth of equipment though, is back in Iraq, where it is expected to remain for all or most of 2004. The Marine Corps is currently performing maintenance on the remaining squadron of equipment that was used during OIF, and this work is scheduled to be completed in 2005.⁷⁴

For the Army the cost is even higher. Most of the equipment that the Army used for OIF is still in use or is being held in theater in the event it may be needed in the future. The Army used nearly all of its prepositioned ship stocks and it's ashore stocks in Kuwait and Qatar, as well as drawing some stocks from Europe. In total, this included more than 10,000 pieces of rolling stock, 670,000 repair parts, 3,000 containers, and thousands of additional pieces of other

⁷² Blount Island Command Brief dated 11 December 2003. available at https://mcpic.bic.usmc.mil/KME_V2/relatedlinks.aspx?NodeID=5, Internet; accessed 30 March 2004.

⁷³ Statement of William M. Solis, Director, Defense Management and Capabilities, before the Subcommittee on Readiness, Committee on Armed Services, House of Representatives Observations on Army and Marine Corps Programs During Operation Iraqi Freedom and Beyond, United States General Accounting Office, 24 March 2004.

⁷⁴ Ibid.

equipment. Although the Army is repairing the gear in theater, it may be 2006 or later before this equipment becomes available to be reconstituted to refill the prepositioned stocks. Officials also said that, after having been in use for years in harsh desert conditions, much of the equipment would likely require substantial maintenance and some will be worn out beyond repair.⁷⁵ The current status of the services' prepositioned sets is discussed in the table below.

Current Status of Selected Prepositioning Programs (as of March 2004)		
	Location	Status
Army	Kuwait and Qatar	The equipment and supplies from these locations are still in use to support continuing operations in Iraq
	Korea	This brigade set of equipment is currently filled to approximately 90 percent
Afloat		Equipment and supplies from 10 of 11 ships were downloaded to support OIF and, most of this equipment remains in Iraq or Kuwait. One combat ship has been partially filled to support two Army battalions. One ammunition ship remains on station and another is in the maintenance cycle. The Army is also working to reconstitute equipment for a support ship and another combat ship, but it is unclear how much equipment will be available to source these requirements
	Europe	Stocks in Luxembourg, the Netherlands and Italy have been depleted to support ongoing operations
USMC	Afloat (Guam)	This six-ship squadron was not used in OIF and has almost its full compliment of stocks
USMC	Afloat (Mediterranean)	One ship has been downloaded in support of OIF and another has been partially downloaded. This squadrons equipment is currently filled to about half of its requirement and will complete normal maintenance cycle in 2005.
USMC	Afloat (Diego Garcia)	This squadron's equipment was used during the first phase of OIF, was repaired to combat condition but not to normal standards, and has been downloaded for reuse in Iraq.
	Norway	Stocks in Norway were used too support OIF. Currently, the stocks have approximately two-thirds of the authorized equipment. ⁷⁶

Army and Marine Corps maintenance officials told Mr. William M. Solis' Defense Management and Capabilities committee that it is difficult to reliably estimate the costs of reconstituting the equipment because so much of it is still in use. As a result, the reconstitution timeline is unclear. The Army has estimated that the cost for reconstituting its prepositioned

⁷⁵ Ibid.

⁷⁶ Ibid.

equipment assets is about \$1.7 billion for depot maintenance, unit level maintenance, and procurement of required parts and supplies.⁷⁷

What this all means is that if the capability to reconstitute at sea is achieved, the effort required to reconstitute the stocks and the impact of that effort, as is described above, becomes a thing of the past. Operationally that means that assets that have been damaged can be replaced by those at the depots if they can be evacuated from the sea-base and replaced by equipment transported to the sea-base for further transit ashore. Each of the sea-basing ideas discussed in the next chapter has as one of its tenets a reconstitution-at-sea capability.

CHAPTER FOUR-The Future of the Sea base

The picture below represents what some view as the natural progression to a robust sea based presence. The Mobile Offshore Base, or MOB, has been viewed by supporters as an important capability the United States must achieve and by detractors as an expensive pipe dream that is fraught with risks.



(Figure 1)⁷⁸

As envisioned, the MOB could range anywhere in length from a single 300 meter-long module to multiple modules aligned to form a runway up to 2 kilometers long. All platforms

⁷⁷ Ibid.

considered would provide personnel housing, equipment maintenance functions, vessel and lighterage cargo transfer, and logistic support for rotary wing and short take-off aircraft. The longest platform (nominally 2 kilometers in length) would also accommodate conventional take-off and landing (CTOL) aircraft, including the C-17 cargo transporter. Upon first inspection, the notion of a 2-kilometer long floating platform seems so far beyond belief that it would not be worthy of serious discussion.⁷⁹

In Fiscal Year 1996 the Office of Naval Research (ONR) assumed leadership to conduct a Science and Technology (S&T) program to advance critical design technologies for Mobile Offshore Bases (MOB). An independent group of maritime engineering experts from industry, the American Bureau of Shipping, and academia was tasked to review the Program and its products and render an opinion on MOB feasibility and cost. A key conclusion was that all technology issues identified at the inception of the ONR S&T program that put the MOB beyond the state-of-practice were either resolved or evaluated sufficiently to conclude that there were no inherent showstoppers.⁸⁰ The MOB final report, which summarizes the three-year science and technology program conducted by the Office of Naval Research (ONR) to investigate the feasibility and cost of a MOB, was published in December 2000. The study concluded that a single 1000-1200 foot module would satisfy most of the mission objectives identified in the Mission Needs Statement (MNS) but satisfying all of the objectives would require a platform of up to 6000 feet in length, driven solely by the requirement to operate conventional take off and landing (CTOL) aircraft.⁸¹ The program did not factor in uncertain and revolutionary advances in future aircraft capabilities that could shorten this runway requirement. There were two criteria for MOB feasibility. One, a

⁷⁸ BWTX Technologies homepage, available at <http://www.bwxt.com/Products/mob-bwx.html>, Internet; accessed on 15 March 2004.

⁷⁹ Mobile Offshore Base. Global Security, available at <http://www.globalsecurity.org/military/systems/ship/mob.htm>, Internet; accessed 15 March 2004.

⁸⁰ Naval Facilities Engineering Service Center homepage. MOB website, available from <http://mob.nfesc.navy.mil/default.html>. Internet; accessed 9 April 2004.

⁸¹ Executive Summary. Mobile Offshore Base final report, Office of Naval Research, Washington D.C., December 2000, 2.

necessary characteristic was the structure be survivable to all natural and hostile threats, second was the platform accomplish all of the mission requirements- in other words, be fully functional.

A list of what the MNS required to be fully functional includes:

- An advanced base for air, land, and naval expeditionary forces.
- An in-theater command, control, communications, computer, and intelligence (C4I) capability to a Joint Task Force (JTF)
- A tactical aviation operation and support base for conventional take-off and landing (CTOL), short take-off and landing (STOL), vertical take-off and landing (VSTOL) and rotary wing aircraft
- A base capable of launching and recovering Special Operations Forces (SOF)
- An alternative capability to land-based naval advanced logistic support sites and naval forward logistics sites, to include refueling and re-supply of military units
- Supplemental or alternative mobile pre-positioning of military combat, combat service and combat service support equipment and supplies
- An inter-theater and intra-theater logistics noodle supporting movement of both pre-positioned and deployed equipment and supplies
- A transportation node capable of supporting routine movement of combat and transportation assets ⁸²

Initial estimates were conducted to establish the construction costs for a CTOL capable 5000-foot platform, structure and machinery but without military systems. Those estimates ranged between 5 billion and 10 billion dollars. A second set of estimates was done by extrapolating present practice for hull construction only and ranged from 3.8 billion to 7.4 billion dollars. Based on that information and the experience of the ONR staff, they concluded that a bare bones 5000-foot platform would cost between four billion and eight billion dollars and that a single section of 1000-1200 feet would cost about 1.5 billion dollars which is comparable to the construction costs of a conventional ship like an LHA. The report did point out that use of the MOB avoids non-recoverable costs associated with building and abandoning temporary land bases such as those used in Somalia or Bosnia. Additionally the rapid response possible with a MOB compared to the time required to construct or upgrade facilities has a military value that is difficult to quantify. ⁸³

⁸² Executive Summary. Mobile Offshore Base final report, Office of Naval Research, Washington D.C., December 2000,1.

⁸³ Ibid,5.



(Figure 2)⁸⁴ Sea-based Expeditionary Augmentation Platform

An idea that borrows from the MOB is a recent idea from the Marine Corps: the Sea-based Expeditionary Augmentation Platform or (SEAP), pictured above. The (SEAP) is described as a self-mobile, adjustable platform, derivative of existing technologies. It can float on the surface or be "jacked" completely out of the water to provide a more stable platform. Its telescopic legs can operate in depths up to 1000 feet. As a mobile intra-theater sea-based platform, it is designed to augment/assist MPF(F), enhance sustained operations ashore, and provide the Combatant Commander with a versatile platform to conduct sustained operations.⁸⁵ The exact application of this platform would be dictated by theater needs. Used in concert with the HSV, the SEAP could augment MPF(F) as a selective offload platform and will serve as a forward forward-based mobile sea base and as an offensive combat support platform. There would be one SEAP per each of the MPF(F) squadrons, and each would have billeting for up to 200 Marines. The Sea-based Expeditionary Augmentation Platform has a multitude of applications including:

- a. Selective offload of ships
- b. Staging base
- c. VTOL aircraft operations platform
- d. Embark / Debark platform for landing craft
- e. HSV embark / debark platform
- f. Water production site
- g. Reconnaissance, Surveillance, Targeting Acquisition (RSTA) launch / recovery platform

⁸⁴ Marine Corps Combat Development Command Expeditionary Force Development Center Concepts 2004. Compact Disk

⁸⁵ Ibid.

- h. Emergency recovery platform for VTOL aircraft
- i. Fire support/TMD platform
- j. Forward, rearm and refuel point (FARP), Petroleum Oil and Lubrication (POL) holding site
- k. Aviation/ground maintenance and Supply replenishment⁸⁶

Despite exploiting existing oil-rig technology, this too, is a very ambitious a project. There are other, less dramatic and less costly projects under consideration. Among them is Marine logistician Lieutenant Colonel Adrian Burke's vision of the MPF(F) and the Navy's Combat Logistics Force (CLF) relationship, detailed in an article in the *Marine Corps Gazette*.

Burke's article defined the CLF as a "sea based logistics force that provides the sea borne link between resupply bases and the combatant forces at sea, both by shuttling material to the battle forces and distributing it within those forces through underway replenishment."⁸⁷ The CLF is a vital part of a larger force which includes the MPF(F), as well as the surface combatants we would now call Expeditionary Strike Forces (ESF) and Expeditionary Strike Groups (ESG). The sea base entity, according to LtCol Burke, should become a designated, numbered naval task force that represents the combined collection of ships and commands similar to those that formed during World War Two where aircraft carriers, surface combatants and auxiliary support ships worked in close unison with each other.⁸⁸ Each of those entities had it's own numeric designation but operated as an interdependent unit. He presumes that the promised capabilities of the MPF(F), namely at-sea arrival and assembly and at-sea, inter-ship transfer of containers happens and that the CLF fleet will be able to interface with the MPF(F) shipping. If those things occur then the United States will possess a viable sea base.

⁸⁶ Marine Corps Combat Development Command Expeditionary Force Development Center Concepts 2004. Compact Disk

⁸⁷ LtCol Adrian Burke, "The Creation of the Seabase", *Marine Corps Gazette*, September 2002, 83.

⁸⁸ Ibid, 83.

His vision is similar to one proposed by Lieutenant General Edward Hanlon and Rear Admiral R.A. Route in an article they co-wrote called Enhanced Network Seabasing. As they define it, Enhanced Network Seabase is “the integrated capabilities resident in a family of systems and assets afloat that maximize the projection of all-dimensional naval power both at sea and ashore. It is a quantum leap forward in naval power projection capabilities through phased at-sea arrival and assembly, selective offload, and reconstitution at sea using a netted, dispersed force. This will be enabled by FORCEnet, the command, control and communication aspect of Enhanced Network Seabasing, and will facilitate joint operations across the range of military operations.”⁸⁹ Their assertion is that sea based operations, as envisioned in this concept, provide Joint Force Commanders with an unprecedented degree of operational versatility and tactical flexibility by combining arms from under, on and over the sea to create and exploit opportunities.⁹⁰ ENSeabasing (their shorthand version of the term) includes four distinct advantages for the JFC: physical freedom of movement, freedom of action, reduced vulnerability from attack, and increased agility for forces. ENSeabasing provides naval expeditionary forces the necessary degree of strategic and operational flexibility to rapidly project power ashore and provide theater wide influence from sovereign naval platforms.⁹¹ ENSeabasing and LtCol Burke’s ideas all involve adapting doctrine to planned capabilities. There is another idea that is looking forward by going back.

During Operation Enduring Freedom, initial lack of secure forward bases to support special operations forces (SOF) resulted in the need to use the USS *Kitty Hawk* aircraft carrier, minus the normal compliment of airplanes, as an Afloat Forward Staging Base (AFSB). After studying options for the future possibilities, the Chief of Naval Operation, Admiral Vern Clark, tasked the

⁸⁹ LtGen Edward Hanlon Jr. and RADM R.A. Route “Enhanced Networked Seabasing” Naval Warfare Development Command, available at http://www.nwdc.navy.mil/Concepts/Sea_basing/ENSeabasing.aspx. Internet; accessed 15 March 2004

⁹⁰ Ibid.

Military Sealift Command to examine the feasibility of converting a container ship for use as an AFSB.

Conversion of existing vessels has several advantages. One, they can be delivered faster than building a new ship. Two, they are large enough to accommodate flight operations, maintenance, and berthing. Three, they can be designed to meet SOF requirements or, as some envision, regular Army/Marine infantrymen. Four, reconfiguring five of the converted AFSB's costs the same as one LHD-17, the Navy and Marine Corps' latest amphibious vessel.⁹²

A different spin on the same topic involves using aircraft carriers, perhaps decommissioned aircraft carriers, in the same fashion as the AFSB described above.⁹³ Both versions of this position gear their argument towards SOF but the application has been proposed for general-purpose forces as well. The historical precedence for this idea comes from two sources. The first was Operation Eagle Claw, the failed hostage rescue attempt in 1980 and the second was the use of the USS Kitty Hawk in 1994 to reinstate Haitian President Jean Bertrand Aristide to power. Coincidentally, General Peter Schoomaker, the current Chief of Staff of the Army, participated in both of those operations.

In August 2003, The Defense Science Board's task force on Sea basing published a significant document on the sea-basing concept. The task force was comprised of active duty and retired admirals and Marine generals as well as members of academia and the private sector. Retired Admiral Donald Piling and Dr William Howard both of whom chaired the board, work for the Office of the Undersecretary of Defense for Acquisition, Technology and Logistics. After months of study, the task force reached the following conclusions:

⁹¹ Ibid.

⁹² Stephen M. Carmel, "A Commercial Approach to Sea- Basing, Afloat Forward Staging Bases", *Proceedings*, January, 2004, 78-79.

⁹³ Hunter Keeter, "Key Navy Lessons From Afghanistan: Invest in SOF, PGM's, Sea Basing" *Defense Daily*, 9 July 2002, available at <http://www.freerepublic.com/focus/news/713341/posts>, Internet; accessed 2 February 2004.

- Sea basing represents a critical future joint military capability for the United States. It will help assure access to areas where US military forces are denied access to support facilities.
 - Future sea basing needs are well beyond today's Navy and Marine Corps operating capabilities
 - The complexity and difficulty of sea basing requires a coordinated, spiral development effort to address identified issues and create a joint sea basing "system-of-systems"
- The United States should realistically test its sea basing capabilities to work out problems and develop leadership skills in all Services.⁹⁴

According to the DSB, whichever concept is adopted must address 12 issues to make the future requirement a reality.

Management

1. Meaningful participation by the Army and Air Force in forming a joint capability. (The Army and the Air Force are noted specifically due to the historical dominance of Navy and Marine Corps in issues relating to sea power)

Planning

2. Sustaining troops ashore
3. Protecting the force ashore
4. Countering threats to operations in the littorals--mines, sea skimming missiles, submarines, small boats
5. Concepts of Operation

New Capabilities

6. Cargo transfer at sea
7. A long-range heavy lift aircraft that can be based at sea with capability to support forces ashore and transport troops
8. Ships of appropriate design
9. A shared data communication system with sufficient bandwidth, redundancy and robustness
10. A logistics support system that handles all service materiel interchangeably
11. Intra-theater lift operational at sea state 4
12. Development speed and funding for construction of a modern sea basing capability⁹⁵

CHAPTER FIVE- Conclusions and Recommendations

There are several ideas that have been discussed in this paper with regard to the sea basing proposal. From its beginning with the Near Term Preposition Ships (NTPS) evolving into the MPF, APA and now the MPF(E) and Army Flotilla, the United States has achieved effective

⁹⁴ Defense Science Board Task Force on Sea basing, William Schneider, DSB Chairman, Dr William Howard and Admiral Donald Piling Co-Chairmen. August 2003, Office of the Undersecretary of Defense for Acquisition, Technology and Logistics, Washington D.C.2.

⁹⁵ Ibid. 2.

results thus far. To move forward there are several agencies that exist that will assist in the development of a truly capable joint sea base. A collective effort within the Department of Defense is vital for the sea-basing idea to avoid not becoming mired in the infighting between the services for programs and money. One agency that is positioned to do the most good is the recently formed Joint Expeditionary Force Projection/Sea Basing Capabilities Office, or (JCO).

The purpose of the JCO is to establish a focal point within the DOD to improve the integrated capability of joint task forces to project combat power from multiple domains under varied threat conditions, with special emphasis on sea basing.⁹⁶ The JCO will accelerate sea-basing related expeditionary force projection transformational capabilities. It will leverage and integrate ongoing concept development, studies and analysis; evolving to a joint vision and joint concepts of operation (CONOPS) to develop a roadmap for evolving capabilities over time.⁹⁷

Another source that can be used to develop ideas and share them within the sea-basing community is the Naval Warfare Development Command's Warfare Innovation Development Team Sea-Basing share point website. This web site maintains a repository of all the important papers and briefs that are published that have a bearing on the sea basing idea. Each week an e-mailed newsletter is released with any recently published material referenced as well as schedules for conferences and the like. It is very easy to use and facilitates communication between interested parties. Though originating in Newport, Rhode Island, it is not exclusively dedicated to either the Navy or the Marine Corps but has entries that involve the Army's prepositioning programs and the latest word on the migration to the flotilla program. Additionally there is participation from our allies, most notably the United Kingdom.

⁹⁶ Sea Basing Newsletter number 27. 16 February 2004 Naval Warfare Development Command, Newport, Rhode Island. Naval Warfare Development Command, Warfare Innovation Development Team, Newport Rhode Island. Internet, received via e-mail after enrollment with the NWDC/WIDT. Also available at the SharePoint site https://nwcportal.nwc.navy.mil/nwdc/sea_basing

⁹⁷ Ibid.

Among the issues associated with the sea base is how both our enemies and friends could perceive it. Since deploying joint forces in a maritime environment has benefits, what can be done to minimize the potential negative repercussions, such as political fallout from acting without our allies from the sea-base? First, our Sea Basing efforts should be inclusive of our allies. More than just a token presence, these allied forces must be sizable enough to ensure a sense of partnership with the United States and promote the idea of collective security. Incorporating foreign troops alongside U.S. sea-based forces will require dramatic changes in operational concepts and joint doctrine. Nevertheless, the rewards are great if we succeed in bringing allies into the fold. Second, the full strategic advantages of Sea Basing can be realized only by maintaining diverse basing options, such as ports, airfields, and land bases. This does not diminish the strategic need for Sea Basing, but it recognizes the need for foreign bases or territory to stage U.S. forces, provide logistical support, and give coalition members an opportunity to participate in U.S.-led campaigns. Sea Basing should be pursued because it provides the United States with the strategic and operational flexibility through force projection, maneuverability and the ability to integrate into a larger military effort. Having said that, we should be careful how it is implemented. Coalition partners are a benefit to U.S. multinational operations. They add legitimacy to combat operations by demonstrating international consensus, help defray the economic costs of fighting conflicts and maintaining peacekeeping operations, and facilitate the building of cultural bridges that result from people serving alongside one another. These benefits might not be considered particularly significant when faced with the short-term goal of winning a war, but they do affect our long-term military sustainability and ability to fight and win future conflicts.⁹⁸

⁹⁸ Lieutenant Commander John J. Klein, U.S. Navy, and Major Rich Morales, U.S. Army, "Sea Basing Isn't Just about the Sea," *Proceedings*, January 2004, 37.

One of the ideas discussed was the Mobile Offshore Base (MOB). If realized, the MOB would be able to conduct all of the operations that everyone involved in the sea-basing endeavor states is important. Additionally, if the MOB were to be constructed, the U.S. has existing airplanes, C-130's and C-17's, that could conduct required sustainment operations. It could also accept large vessels for cargo and equipment and still employ the HSV to move that equipment ashore. But, never before has so large a ship been constructed. Additionally the MOB requires a complicated at-sea connection to optimize the capability of the MOB. Although the Science and Technology study by the ONR suggests that it is feasible, at a minimum cost of eight billion dollars, what is sacrificed in order to build it? In early 2001, a study by the Institute for Defense Analysis concluded that the Mobile Offshore Base concept was less cost effective than alternatives such as nuclear-powered aircraft carriers; joint logistics capabilities and Large Medium Speed Roll-on/Roll-off (LMSR) sealift ships.⁹⁹ Another point to consider is what level of conflict would be required to deploy and assemble the MOB? Would we use it in Somalia? Or would it be limited to use in large-scale contingencies like Desert Storm or OIF? It seems disingenuous to build a vessel whose individual parts may be of limited utility, and when assembled represents a slow, large target for the enemy when other avenues, such as the MPF(F), ARF, APS, CLF etc., can be employed across the military spectrum, and additionally, are useful ships unto themselves.

One of the frustrating aspects of examining this idea is how close the United States is to achieving the goal. It must be noted that U.S. naval forces do replenishment and support to ships at sea effectively now. What they cannot do is orchestrate the transfer of containers while underway, nor can we execute arrival and assembly of forces at sea or conduct reconstitution at sea. These deficiencies are supposed to be eliminated with the implementation of the MPF(F),

⁹⁹ Mobile Offshore Base. Global Security , available at <http://www.globalsecurity.org/military/systems/ship/mob.htm> Internet, accessed 14 March 2004.

which, when combined with assets like the ESG and CSG, provides a real opportunity to achieve the sea base that will assure access to regions of vital American interest. That entity though, as LtCol Burke pointed out in his article will need to be partnered with a robust CLF fleet that can sustain them. These ideas do not need the same level of investment the MOB does in order to achieve a functional sea base. Also the MPF(F) and the CLF are funded programs that will not require a Joint Strike Fighter level of investment to accomplish.

The Defense Science Board recommendations listed in Chapter Four more closely describes the planned MPF(F) family of ships. Those ships potentially can be modified to suit the Army's needs as well as those for the Air Force. What they do not describe is a single purpose, non-scalable behemoth like the MOB, which fails to achieve its purpose except when used in a major war and only when reassembled at sea. It does not have the capability to perform as a single vessel like ships of the MPF(F) do, nor have the proponents of the MOB addressed how it would be employed, or why, in a low threat environment.

Therefore, it is my recommendation that the United States Department of Defense pursue a joint vision that encompasses the capabilities of the MPF(F), while retaining service specific attributes that may be found in the Army Flotilla. It is this capability our nation should be investing funds towards to achieve a fully functional sea-base, not the prohibitively expensive Mobile Offshore Base, which, while promising, has more limitations and less flexibility than the system-of-systems promised by the MPF(F) family of ships.

The sea-base has a truly revolutionary potential. It could change the way we fight and win wars. Lieutenant General Hanlon, USMC said, "If we get this concept of sea basing right, it might well be one of the most transformational things the Department of Defense, and our naval

forces, will ever do. We will most importantly, offer our nation a truly quantum leap over what we have today.”¹⁰⁰

¹⁰⁰ Colonel Arthur Corbett USMC and Colonel Vincent Goulding USMC (ret) “Sea Basing-What’s New,” *Proceedings*, November 2002, 34.

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